

SYSTEM AND METHOD FOR LOW-NOISE AMPLIFIER WITH A HIGH FREQUENCY RESPONSE

ABSTRACT OF THE DISCLOSURE

A variable gain low noise amplifier is disclosed that offers flat gain versus frequency
5 throughout the entire cable and broadcast television signal spectrum. The circuit uses
multiple stages and buffering techniques to cancel the primary source of high frequency gain
degradation. The invention also uses variable capacitor networks which track with gain
control to control peaking within the circuit so as to have consistent gain control with
frequency and gain. A further aspect of the invention is in the use of capacitors within the
10 circuit to act as simple band-pass filters to roll off segments of the spectrum away from the
channel of interest, thus reducing system-level distortion in a receiver.

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